

Fairplay Solutions

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Telephones help tackle tampering in transit

LAST month *Solutions* looked at some of the latest developments in technology aimed at improving container security. The systems featured in that article used RFIDS to aid in monitoring a containers position and tripping devices to record any unauthorised door openings. There are also other systems being developed which have been brought to *Solutions'* attention.

UK-based shippers' organisation, the Overseas Shippers Association (OSA) is taking part in trials to track containers using a device called TripLock. TripLock is supplied by Aeromark, a UK based telematics company and has the ability to position a container anywhere within the mobile phone network and send notification to the shipper if anyone tampers with the container door.

A door sensor is built into the unit that sends an immediate alert if the door is opened in transit. The device is mounted inside the container door and has a small aerial on the outside to which it continually receives its GPS position and transmits a GSM communication to show its location. This allows remedial action to be taken at destination if necessary, however more importantly it has the ability to prove that a container was not opened during a voyage.

TripLock is supplied in a rugged transit case which can be put inside a container before

sealing. The case can be used to courier the unit back to its owner after use or the device can be re-used on a return container. It is powered by a re-chargeable battery with an operating life of approximately 30 days, however developers are currently working to extend battery life to accommodate the longest sea voyages.

Users of the TripLock system can set up the unit for each journey over the internet using secure login codes so no bespoke software is required.

Another system that employs GPS and sophisticated locking devices has been developed by a Dutch company, ZOCA Container Security. Unlike the other systems covered so far, in which the locking devices merely record if the door has been opened, ZOCA has developed an innovative approach to preventing unauthorised opening of containers. The ZOCA approach taps Iridium satellite data links to control the containers' locking devices remotely.

The Dutch system consists of a strong mechanical tamper-proof lock, which can only be operated with a ZOCA handheld mobile device. In order to lock or unlock the container, the handheld instrument must be plugged into a connection on the outside of the container. The control unit then sends a security code for the lock to a central computer at ZOCA's global processing centre through



Installing the TripLock device in a container is a simple task

the Iridium satellite network. The central computer confirms the correct security code but it also has an additional security feature which must be satisfied before allowing the lock to be opened.

After confirming the security code, the computer then checks the GPS co-ordinates of the container to ensure it is in the proper location and transmits a signal that permits the container to be unlocked.

Jaap van den Hoek, director of ZOCA Container Security, said, "Worldwide smuggling enterprises have become increasingly sophisticated. The ZOCA system effectively combats thefts by organised criminals as well as pilferage by employees and cargo handlers."

"The container can only be opened with the handheld control unit when the container is at its correct location, such as a terminal," added van den Hoek. "The system also records the date, time and location whenever the container is unlocked, making it

easy to track down any incidents of unauthorised openings."

Last month Savi Networks – one of the systems featured in last month's *Solutions* and US West Coast terminal operator, Marine Terminals Corporation (MTC), announced an agreement to extend SaviTrak real-time, supply-chain information services to MTC's port facilities.

Initially, implementation of the system is focused on the highest-volume ports, including Los Angeles, Long Beach, Seattle, Tacoma and Oakland. Los Angeles-Long Beach is the highest-volume load centre in the US and Seattle-Tacoma the third largest.

Both companies also emphasised that the information services currently being deployed are built on an open technology platform accommodating multiple and interoperable AIDC technologies, such as barcodes, passive RFID technologies such as EPC, and Global Positioning Systems (GPS) used to track ships and trucks that transport ocean containers.